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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/554,184	10/21/2005	Morihiko Sato	450100-05044	7823
7590 William S Frommer Frommer Lawrence & Haug 745 Fifth Avenue New York, NY 10151			EXAMINER BATTAGLIA, MICHAEL V	
			ART UNIT 2627	PAPER NUMBER
			MAIL DATE 04/08/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/554,184

**Applicant(s)**

SATO, MORIHIKO

**Examiner**

Michael V. Battaglia

**Art Unit**

2627

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 5 and 6 is/are rejected.
- 7) ☒ Claim(s) 3 and 4 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB-08)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Specification***

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

***Drawings***

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character "16" not mentioned in the description. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims are rejected under 35 U.S.C. 103(a) as being unpatentable over Murai et al (hereinafter Murai) (US 4,873,679) in view of Furumiya et al (hereinafter Furumiya) (US 5,488,593).

In regard to claim 1, Murai discloses a reproducing apparatus (Figs. 5 and 7) in which a first reproduction signal and a second reproduction signal are simultaneously obtained by a plurality of reading means (Figs. 5 and 7, elements 39 and 40) from a disc-shaped recording medium (Figs. 5 and 7, element 38) on which data of a high-transfer rate and data of a low-transfer rate have been recorded (Col. 9, lines 6-51), comprising: signal layout converting means (Fig. 7, elements 56, 57 and 61) for time division multiplexing said first reproduction signal and said second reproduction signal and arranging them; sync adjustment information forming means (Fig. 7, elements 50, 51 and 60) for forming sync adjustment information ("address information" of Col. 9, line 40 and information which "sets up in advance the synthesized oscillators . . . so that they oscillate comparing source oscillation frequencies corresponding to the target addresses" (Col. 9, lines 51-55)) which is optimum to each reproduction signal from said first reproduction signal and said second reproduction signal (Col. 9, lines 51-62); and a PLL (Fig. 7, elements 52 and 53) for generating a clock ("reproduction clock" of Col. 9, lines 58-59) signal according to said sync adjustment information (Col. 9, lines 51-62). Murai does not disclose a waveform equalizing means for executing a waveform equalizing process to an output of said signal layout converting means; and a switching means for switching characteristics of said waveform equalizing means in accordance with said sync adjustment information.

Furumiya teaches that a reproducing apparatus (Fig. 1) in which a first reproduction signal and a second reproduction signal are simultaneously obtained by a plurality of reading means (Fig. 1, elements 1 and 2) from a disc-shaped recording medium (Figs. 1 and 2, element 3) on which data of a high-transfer rate and data of a low-transfer rate have been recorded (Col. 4, line 55-Col. 5, line 3), comprising: sync adjustment information forming means (Fig. 7, element 7) for forming sync adjustment information ("address signals" of Col. 3, line 35); waveform equalizing means (Fig. 1, elements C1, C2 and 20) for executing a waveform equalizing process (Col. 3, line 54-Col. 4, lines 32); and a switching means (Fig. 1, element 9) for switching characteristics of said waveform equalizing means in accordance with said sync adjustment information (Col. 3, lines 37-48). Furimaya teaches that, by doing so, the reproduction signals are equalized with an equalizer having characteristics suited for the rate at which the information was transferred (Col. 3, lines 54-64).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the apparatus of Murai to include a waveform equalizing means for executing a waveform equalizing process to an output of the signal layout converting means of Murai and a switching means for switching characteristics of said waveform equalizing means in accordance with said sync adjustment information of Murai as suggested by Furumiya, the motivation being for the output of the signal layout converting means of Murai to be equalized with an equalizer having characteristics suited for the rate at which the information was transferred. It is noted that applying the waveform equalizing means and switching means of Furumiya to the output of the signal layout converting means of Murai would be well within the skill of one of ordinary skill in

the art at the time of the invention (see switching means (Fig. 2, elements 25 and 28) and waveform equalizing means (Fig. 2, elements 26 and 27) of Sato et al (US 6,134,196)).

In regard to claim 2, Murai discloses that the signals are reproduced so that the sum of the transfer rate of said first reproduction signal and the transfer rate of said second reproduction signal is set to be almost constant (Col. 9, lines 9-35 and 64-67).

In regard to claim 5, Murai discloses that said disc-shaped recording medium has a duplex recording structure and said reading means are provided for both sides of the disc (Figs. 5 and 7).

In regard to claim 6, Murai in view of Furumiya discloses a reproducing method corresponding to the means of the reproducing apparatus of claim 1 (see rejection of claim 1 above).

***Allowable Subject Matter***

5. Claims 3 and 4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. None of the references of record alone or in combination suggest or fairly teach a reproducing apparatus including all the limitations of claim 1 and wherein said PLL comprises a voltage controlled oscillator, a phase comparator for phase-comparing an output of said voltage controlled oscillator or its frequency-divided output with an edge detection pulse of the reproduction signal, and a charge pump filter to which an output of said phase comparator is supplied and which forms a control voltage for said voltage controlled oscillator, **and an output frequency of said voltage controlled oscillator and a pulse width of said edge**

**detection pulse are controlled on the basis of switching information of heads and linear velocity information as said sync adjustment information.**

***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Miyazaki et al (US 5,600,623) (Fig. 2), Koishi (US 5,240,690) (Fig. 1), and Kudo et al (US 5,656,348) (Figs. 7 and 9) disclose a reproducing apparatus in which a first reproduction signal and a second reproduction signal are simultaneously obtained by a plurality of reading means from a disc-shaped recording medium on which data of a high-transfer rate and data of a low-transfer rate have been recorded. Bannai et al (US 5,383,063) (Fig. 1) and Guo et al (US 6,437,937) (Fig. 3) disclose reproducing apparatuses in which reproduction signals from a plurality of reading heads are multiplexed.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael V. Battaglia whose telephone number is (571)272-7568. The examiner can normally be reached on M-F, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, A. Wellington can be reached on (571) 272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael V. Battaglia/  
Primary Examiner, Art Unit 2627